

NEW REARED PARASITIC HYMENOPTERA FROM THE PHILIPPINES

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The writer has recently had opportunity to study several series of reared parasitic wasps received by the Bureau of Entomology from the Philippine Islands. Six species have been found to be new to science and are described in the following pages. Because of the definite host records, this material is especially interesting and valuable. Two of the new species were sent in by Prof. C. F. Baker, while the others were all received from Prof. Charles S. Banks, at the time chief of the department of entomology of the College of Agriculture, at Los Baños. Two new species are said to be parasitic upon scale insects, two species were reared from the eggs of a hemipteran, one species is parasitic upon a leaf-mining buprestid, and one species issued from cocoons of a gracillarid moth.

Superfamily CHALCIDOIDEA

ENCYRTIDÆ

Homalotylus mundus sp. nov.

Very similar in appearance to *H. albitarsis* Gahan, but easily distinguished by the fact that the vertex is narrower, the legs are slightly differently colored, and the ovipositor is distinctly longer.

Female.—Length, 1.5 millimeters. Vertex, frons, and face granularly opaque; head behind the eyes faintly lineolate and more or less shining; vertex very narrow, at its narrowest point less than the length of pedicel; antennal scape long and slender; pedicel nearly three times as long as thick and distinctly longer than first funicle joint; first funicle joint approximately one and one-half times as long as thick, second slightly longer than thick; following joints subquadrate; club not thicker than the funicle and about as long as three preceding funicle joints combined, pointed at apex; pronotum and meso-

scutum scaly punctate, slightly shining; axillæ and scutellum granularly opaque; propodeum very faintly shagreened and shining; mesopleura lineolate-reticulate, subopaque; legs long, the posterior femora and tibiæ strongly compressed; middle tibial spur slender and somewhat longer than metatarsus; abdomen shorter than thorax and slightly narrower, rather strongly sculptured dorsally; ovipositor exerted about half the length of abdomen. Head, prothorax beneath, axillæ, and scutellum pale orange yellow; pronotum dorsally, mesoscutum, metathorax, propodeum, and abdomen brownish black, the propodeum and abdomen tinged with bluish; antennal scape, pedicel, and first three funicle joints blackish; funicle joints beyond the third, and the club white; tegulæ whitish basally, apical half brownish; perfectus mostly pallid; forewings subhyaline at base and apex with a broad fuscous cloud across the middle, and with a distinct narrow hairless line from the base of stigmal vein nearly to the posterior margin of wing; mesopleura, all coxæ, posterior femora above, and hind tibiæ dark brown or blackish; anterior and median femora and tibiæ, and a marginal stripe on posterior femora beneath pale testaceous; all tarsi pallid.

Male.—Agrees in every way with the description of the female.

Type locality.—LUZON, Laguna Province, Los Baños.

Type.—Catalogue No. 22344, United States National Museum.

Host.—*Pseudococcus virgatus* Cockerell.

Described from 15 specimens, 8 females and 7 males, received from Prof. C. F. Baker, by whom they were reared from the above-named coccid.

The color of this species is somewhat variable. The antennæ are not infrequently entirely white beyond the first funicle joint; legs are frequently stained with brownish, and the mesopleura vary from about the color of the mesoscutellum to nearly black.

Taftia saissetiæ sp. nov.

This species is extremely close to *T. prodeniæ* Ashmead, but is somewhat darker in color and differs also by having the funicle joints of the female antennæ distinctly compressed, those beyond the first obliquely truncate at apex and dorsally overlapping the base of the following joint; joints 3 to 6 of the funicle, viewed laterally, all distinctly broader than long and successively broader toward the club, the sixth twice as broad as long. In *prodeniæ* the funicle joints are more nearly cylindrical and all except the last are slightly longer than broad with the apical truncation squarely transverse. The males can

be distinguished from those of *prodeniæ* only by the fact that the form is slightly more robust, the propodeum mesad of the spiracle is opaque, and the face is dark green instead of strongly purplish.

Female.—Length, 1.6 millimeters. Head, pronotum, mesoscutum, axillæ, and scutellum opaquely punctate, the sculpture of scutellum very finely granular; mesopleura nearly smooth; metapleura and propodeum subopaque; abdomen as broad and about as long as the thorax, subtriangular, the dorsum weakly shagreened. General color very dark brown, the thorax above and the abdomen nearly black; propodeum and to some extent the sides of pronotum and the metapleura dark reddish testaceous; scape, pedicel, and funicle dark reddish testaceous, the funicle shading into dark brown toward apex and with the sutures between joints brown; club nearly black; legs concolorous with scape; their tibiæ somewhat darker; wings from beyond the middle of submarginal vein to apex faintly infuscated, the infuscation strongest along the submarginal vein basad of the marginal vein.

Male.—Length, 1.2 millimeters. Less-strongly sculptured than the female; viewed from in front, the head within the antennal depression weakly sculptured and more or less shining; frons and vertex opaquely punctate, with a few larger scattered punctures; antennal flagellum subcylindrical, very slightly compressed, the funicle joints subquadrate, club elongate-ovate, about as long as the two preceding funicle joints and scarcely broader than the funicle; abdomen very short, semicircular or subtriangular in outline and not much longer than the scutellum. Head, thorax, and abdomen black; scape and pedicel pale testaceous beneath, more or less brownish above; funicle and club black; coxæ concolorous with thorax; all femora and tibiæ brownish testaceous, the tarsi pale testaceous; wings subhyaline.

Type locality.—LUZON, Laguna Province, Los Baños.

Type.—Catalogue No. 22343, United States National Museum.

Host.—*Saissetia hemisphærica* Targioni.

Four females and 2 males, received from Prof. C. F. Baker, bearing his Nos. 11562 and 11563.

PTEROMALIDÆ

Acroclisoides luzonensis sp. nov.

Agrees with the characterization of the genus by Girault.¹

Male.—Length, 1.6 millimeters. Head very broad, much

¹ Mem. Queensland Mus. 3 (1915) 334.

broader than the thorax, viewed from in front nearly one and three-fourths times as broad as long; ocellocular line nearly twice as long as the postocellar line; whole head strongly reticulate-punctate, the mouth region not striated; clypeus separated from the face by a very indistinct groove which is darker than the rest of the face; the anterior margin of clypeus triarcuately emarginate, the emarginations not deep; mandibles very large, 4-dentate; malar space at base of mandibles deeply concave; antennæ inserted above the middle of the face; scape reaching a little beyond the posterior ocelli; pedicel nearly globular; two transverse ring joints; funicle 6-jointed, the first joint approximately twice as long as the pedicel, the following funicle joints gradually decreasing in length, the sixth nearly twice longer than broad; club 3-jointed, slightly longer than the two preceding funicle joints; pronotum short, transverse, a little narrower than the mesoscutum, punctate, its posterior margin narrowly shining and impunctate; mesoscutum and scutellum sculptured like the head, the mesoscutum nearly twice as broad as long, with distinct complete parapsidal grooves; axillæ shining, with faintly reticulate sculpture; propodeum medially sculptured like the scutellum, with a very distinct median carina, the lateral folds represented by a large round fovea at base on either side of the middle, the spiracular sulci very deep, the surface of the propodeum on either side of the spiracular sulcus smooth and polished; neck of propodeum short; marginal vein of forewing distinctly though not greatly thickened; stigmal vein slightly shorter than the marginal and with a rather large knob; post-marginal very slender and somewhat longer than the marginal; abdomen approximately as long as thorax, spatulate in outline; petiole short, slender, and polished, much shorter than the hind coxæ; following tergites all smooth and polished, the second triangular and constituting about one-third the length of the abdomen; third and fourth together about equal in length to the second; those beyond the fourth very short. Head, thorax, and all coxæ bright aëneous; apex of hind coxæ more or less testaceous; abdomen brownish black with more or less bluish metallic reflections; flagellum brownish black; antennal scape, pedicel, and all of legs except their coxæ, pale reddish testaceous; wings hyaline.

Type locality.—LUZON, Laguna Province, Los Baños.

Type.—Catalogue No. 22348, United States National Museum.

Host.—*Tectocoris lineola* Fabricius.

Described from 3 males, received from Prof. Charles S. Banks, of the College of Agriculture, University of the Philippines; accession No. 18474; reared, June 24 to 27, 1918.

Professor Banks states that the parasite cuts a large sickle-shaped opening in the top of the egg when emerging, and that the larva devours less than half of the contents of the egg. There is but one parasite to the egg.

This species was reared from the same clutch of eggs as *Aphanurus banksi*, described in this paper, and may be a parasite of the *Aphanurus*.

ELASMIDÆ

Elasmus albomaculatus sp. nov.

Female.—Length, 2.3 millimeters. Antennal scape slender, pedicel shorter than the first funicle joint; funicle joints subequal, cylindrical, the first very slightly the longest, third joint approximately twice as long as thick; club about as long as joints two and three of the funicle combined; vertex and frons with large scattered punctures; pronotum and mesoscutum rather strongly scaly-punctate, each puncture with a dark hair; scutellum very faintly reticulately sculptured, nearly smooth; metanotum triangular, projecting posteriorly over the propodeum; propodeum faintly sculptured like the scutellum, without carinæ; pleura and hind coxæ laterally finely lineolate; middle femora with a single long stiff bristle on the inner side at apex; hind tibiæ posteriorly with rows of hairs arranged in distinct, diamond-shaped figures; hairs on basal joint of middle and hind tarsi in distinct rows; wings long and rather narrow, extending to apex of abdomen; abdomen somewhat longer than the head and the thorax combined. Head and mesoscutum dull blue-green; antennal flagellum brown, scape pale yellow; scutellum black, very slightly metallic; narrow line at base of tegulæ, small marginal spot on mesoscutum just above tegulæ and the triangular metanotum yellowish white, the latter with a hyaline border; propodeum dull bronze; rest of thorax, abdomen, all coxæ and all femora, except anterior pair at apex, shining black. Apices of front femora and all tibiæ whitish; tarsi mostly dark; hairs on legs black; wings hyaline.

The species is very similar to *E. elegans* Crawford, but differs in having the abdomen and all coxæ black, and in the presence of the white spot before the tegulæ. Differs from *E. philippinensis* Ashmead in having much longer funicle joints, as well as in color.

Type locality.—LUZON, Manila.

Type.—Catalogue No. 22347, United States National Museum.

Host.—*Acrocercops* sp.

Described from 2 female specimens, received from Prof. Charles S. Banks, of the College of Agriculture, University of the Philippines, accession No. 18477. Professor Banks bred the specimens from the cocoons of a moth the larva of which feeds on *Cæsalpinia pulcherrima* (L.) Sw. The moth, specimens of which were received along with the parasite, has been determined by Mr. August Busck as *Acrocercops* sp., a gracillarid.

EULOPHIDÆ

Pleurotropis anomala sp. nov.

While a typical *Pleurotropis* in every other respect, this species differs markedly from any other species known to the writer in the conformation of the mesoscutum.

Female.—Length, 1.5 millimeters. Head viewed from in front smooth and polished above the transverse groove; vertex divided by a distinct, shallow groove running from the anterior ocellus posteriorly to the occipital carinæ; between the transverse groove and base of antennæ reticulated and subopaque; below the antennæ smooth and polished; eyes with their medial margins slightly emarginate; posterior orbits very narrow; antennæ inserted near clypeus; scape slightly fusiform; pedicel pyriform, approximately one-third as long as scape and slightly shorter than the first funicle joint; funicle 3-jointed, the joints subequal and all distinctly shortly pedicellate at apex; club conic-ovate, about one and one-half times the length of third funicle joint, 2-jointed, the second joint terminating in a distinct spine; dorsal portion of pronotum polished and delicately margined anteriorly, the declivitous portion sculptured; mesoscutum with a straight, deep, transverse fold across the middle connecting the parapsidal grooves; behind this fold and extending to the posterior margin of the mesoscutum a deep, broad, rectangular depression divided by a median longitudinal ridge and homologous with the two shallow foveæ at the posterior end of the parapsidal grooves found in other species of the genus; depressed area of the mesoscutum perfectly smooth, remainder of mesoscutum and the scutellum delicately reticulate, interstices rather large and polished, those at base of scutellum longitudinally elongate and the median base of scutellum with a small area which is not reticulated; axillæ polished; propodeum polished and with delicate carinæ, the two median carinæ rather strongly diverging

posteriorly; wing veins rather slender, stigmal knob small, post-marginal very delicate and indistinct; abdomen a little longer than the head and thorax combined; first segment (petiole) about as broad as long, opaquely shagreened, and weakly margined laterally; second tergite constituting more than half the length of abdomen; above smooth and polished on basal two-thirds, the apical third delicately reticulated; beneath finely, longitudinally striated; tergites beyond the first short, subequal, very faintly sculptured. Sculptured portion of face blackish; antennæ blackish with metallic reflections; frons, vertex, pronotum dorsally, mesoscutum, scutellum, propodeum dorsally, and unsculptured portion of second abdominal segment highly metallic blue-green; thorax laterally and beneath and the legs bluish black with metallic reflections; abdomen beyond the apical third of second tergite and beneath, black; narrow apex of tibiæ and basal three joints of all tarsi whitish; two apical tarsal joints blackish; wings hyaline.

Male.—Length, 1.2 millimeters. Antennæ missing. Like the female except that the head is entirely metallic green, the sides of thorax are more strongly bluish, the abdomen is scarcely as long as thorax, its petiole distinctly longer than broad; the second tergite occupies most of the dorsal surface of abdomen and is not so distinctly striated beneath, and only the apical tarsal joint is black.

Type locality.—LUZON, Laguna Province, Los Baños.

Type.—Catalogue No. 22345, United States National Museum.

Host.—*Endelus bakeri* Kerremans.

Type, allotype, and female paratype, and the head of a third female received from Prof. Charles S. Banks, of the College of Agriculture, University of the Philippines, accession No. 18394. Reared on February 25, 1918, from the above-named leaf-mining buprestid. Antennæ from female paratype mounted on a slide.

Superfamily SERPHIDOIDEA

SCELIONIDÆ

Aphanurus banksi sp. nov.

This species runs straight to the genus *Aphanurus* in J. J. Kieffer's key to the genera of Telenominæ² and agrees with the description of the genus.

² André Spéc. Hym. Eur. Alg. 11 (1912) 7.

Female.—Length, 1.5 millimeters. Head strongly transverse, as broad as the thorax, strongly rugose-punctate; ocelli touching the eye margin; front of head between base of antennæ and anterior ocellus with strong, transversely directed rugæ, except a small, nearly smooth area immediately in front of the ocellus; malar space with two strong, parallel carinæ running from the clypeus to the eye margin, and a third, weaker, subparallel carina behind these two; the middle carina continued as a sharp orbital carina narrowly separated from the eye margin and reaching to the vertex; eyes glabrous; antennal scape reaching to the front ocellus; pedicel slender, about twice as long as broad at apex; third antennal joint a little longer than the pedicel, fourth a little longer than broad and narrower at base than at apex; fifth transverse; club distinctly 6-jointed, the joints all slightly broader than long, except the last, which is a little longer than broad; thorax coarsely sculptured; mesoscutum posteriorly with coarse, irregular, longitudinal striation; scutellum coarsely rugose; propodeum very short, visible from above only laterally where it is rugosely sculptured, more or less concave behind, the concave posterior face bounded by a sharp carina; stigmal vein of front wing more than twice as long as the marginal, postmarginal nearly twice as long as the stigmal; abdomen about as long as thorax; first tergite strongly longitudinally striate, second tergite coarsely foveolate at base and with the basal three-fourths indistinctly striate, apical fourth of the second tergite and all of the short third tergite smooth, tergites beyond third concealed from above; second sternite extending nearly to apex of abdomen, coarsely foveolate at base, strongly longitudinally striate anteriorly and laterally, with the posterior middle area and the apex smooth and polished. Black; scape, pedicel, three basal joints of the flagellum and legs, except coxæ, reddish testaceous; wings hyaline.

Male.—Agrees with the female except that the antennæ are reddish testaceous, only the club slightly brownish; pedicel is scarcely longer than broad; the third antennal joint is approximately twice as long as pedicel, the fourth very slightly shorter than third, the fifth about one and one-half times as long as broad, the sixth very slightly longer than broad, the seventh to the tenth globular and shortly petiolate, the eleventh conical and one and one-half times as long as broad. The anterior

carina as well as the posterior one on the malar space are weaker than in the female, only the median one being prominent.

Type locality.—LUZON, Laguna Province, Los Baños.

Type.—Catalogue No. 22346, United States National Museum.

Host.—*Tectocoris lineola* Fabricius.

Two females, 3 males, and 1 broken specimen, the sex of which cannot be determined, received from Prof. Charles S. Banks, under College of Agriculture, University of the Philippines, accession No. 18476; reared, July 5 to 23, 1918, from the eggs of *Tectocoris lineola* Fabricius.